Please amend claims 1, 3, 4, 15 and 25 as indicated in the following listing of claims, which will replace all prior versions and listings of claims in this application.

1.   (Currently Amended) A method of coding a view in a 2-dimensional CAD drawing, the method comprising:

a)   filtering the <u>2-dimensinoal CAD</u> drawing to temporarily remove extraneous material therefrom;

b)   identifying a view in the drawing for coding;

c)   identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities;

d)   extracting properties of the feature from the <u>2-dimensional</u> CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities;

e)   generating code bits representative of the extracted properties;

f)   adding the code bits to a view code for the view; and

g)   storing the view code.

2. (Original) A method according to claim 1, further including repeating steps c) to f) for further entities and/or groups of entities in the view.

3. (Currently Amended) A method according to claim 1, wherein the group of graphic entities includes entities having similar properties, entities of a similar type or entities which form [a] the group by virtue of their location or juxtaposition in the, view.

4. (Currently Amended) A method according to claim 1, wherein the step of identifying [a] the view for coding comprises defining a boundary enclosing an area which includes the graphic entities in the drawing and dividing the area to define a plurality of view areas, such that each view area includes one or more graphic entities, and no graphic entity is included in more than one area.

5. (Original) A method according to claim 4, wherein the boundary is a bounding rectangle, the step of dividing the boundary to define a plurality of view areas comprising splitting the bounding rectangle to define a plurality of view rectangles.

6. (Original) A method according to claim 4 further including the step of refining the views to be coded by removing all views having less than a predetermined number of entities and passing for coding views having greater than or equal to the predetermined number of entities.

7. (Original) A method according to claim 1, wherein the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types, each property type having associated items of property data, extracting the property data from the CAD drawing and writing the type and associated property data items to a list.

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8. (Original) A method according to claim 7, wherein the step of generating code bits includes setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

9. (Original) A method according to claim 8, wherein the setting of data code bits includes comparing each property data item with a predetermined sub-set of data associated with a given code bit and setting the given data code bit if the property data item falls within the predetermined sub-set.

10. (Original) A method according to claim 9, wherein each code bit has an associated attribute, a method for comparing the property data item with the predetermined sub-set of data associated with the code bit being determined by the attribute.

11. (Original) A method according to claim 10, wherein the attribute associated with the code bit is a predetermined attribute selected from a list of attributes which includes range, numeric and text, having respective associated comparison methods of:

"within range" wherein the code bit is set when the property data item has a value that falls within a predetermined range;

"greater than, less than, equal" wherein a different code bit is set according to whether the property data item has a value greater than, less than or equal to a predetermined value; and

"substring" wherein the code bit is set if there is exact correspondence with a predetermined text substring.

12. (Original) A method according to claim 1, wherein the view code has a predefined structure of code bits, and the drawing has a predetermined class, the code structure being defined differently for drawings having different classes.

13. (Original) A method according to claim 1, wherein the step of storing the view code includes encrypting the view code and storing the encrypted view code.

14. (Original) A method according to claim 13, wherein the step of storing comprises storing the encrypted view code in a catalogue, the catalogue being a portion of the database in which a sub-set of drawings is stored.

15. (Currently Amended) A method according to claim 13, wherein the step of storing includes storing encrypted view codes of all views in [a] the drawing.

16. (Original) A method according to claim 15, further including storing at least one of an image file of the drawing, details of a part or component depicted by the drawing, and other information relating to the drawing.

17. (Original) A method according to claim 1, wherein the step of filtering the drawing includes temporarily removing a frame/border of the drawing.

18. (Original) A method according to claim 17, wherein the frame/border is temporarily removed by identifying line entities which make up the frame/border, identifying an inner

boundary of the frame/border line entities, and temporarily deleting all graphic entities outside the inner boundary.

19. (Original) A method according to claim 17 or claim 18, wherein the filter process includes temporarily removing other entities including any one or more of: dimensions, machining marks, lines of prescribed type or name or colour, drawing layers of prescribed name, text with prescribed colour, and blocks.

20. (Original) A method of coding a view from a 3-dimensional CAD model, the method comprising: a) deriving a 2-dimensional view from the 3-dimensional CAD model; b) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities; c) extracting properties of the feature from the CAD model, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; d) generating code bits representative of the extracted properties; e) adding the code bits to a view code for the view; and f) storing the view code.

21. (Original) A method according to claim 20, further including repeating steps b) to e) for further entities and/or groups of entities in the view.

22. (Original) A method according to claim 20, including repeating steps a) to f) for further views from the 3-dimensional CAD model so as to store a plurality of codes of different views.

23. (Original) A method of coding a view in a CAD drawing, the method comprising: a) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities; b) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; c) generating code bits representative of the extracted properties; d) adding the code bits to a view code for the view; and e) storing the view code.

24. (Original) A method according to claim 23, further including repeating steps a) to d) for further entities and/or groups of entities in the view.

25. (Currently Amended) A method according to claim 23, wherein the group of graphic entities includes entities having similar properties, entities of a similar type or entities which form [a] the group by virtue of their location or juxtaposition in the view.

26. (Original)   A method according to claim 23, wherein the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types, each property type having associated items of property data, extracting the property data from the CAD drawing and writing the type and associated property data items to a list.

27. (Original) A method according to claim 23, wherein the step of generating code bits includes setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

28. (Original) A method according to claim 27, wherein the setting of data code bits includes comparing each property data item with a predetermined sub-set of data associated with a given code bit and setting the given data code bit if the property data item falls within the predetermined sub-set.

29. (Original) A method according to claim 28, wherein each code bit has an associated attribute, a method for comparing the property data item with the predetermined sub-set of data associated with the code bit being determined by the attribute.

30. (Original) A method according to claim 29, wherein the attribute associated with the code bit is a predetermined attribute selected from a list of attributes which includes range, numeric and text, having respective associated comparison methods of: "within range" wherein the code bit is set when the property data item has a value that falls within a predetermined range; "greater than, less than, equal" wherein a different code bit is set according to whether the property data item has a value greater than, less than or equal to a predetermined value; and "substring" wherein the code bit is set if there is exact correspondence with a predetermined text substring.

31. (Original) A method according to claim 23, wherein the view code has a predefined structure of code bits, and the drawing has a predetermined class, the code structure being defined differently for drawings having different classes.

32. (Original) A method according to claim 23, wherein the step of storing the view code

includes encrypting the view code and storing the encrypted view code.

33. (Original) A method according to claim 32, wherein the step of storing comprises storing the encrypted view code in a catalogue, the catalogue being a portion of the database in which a sub-set of drawings is stored.

34. (Original) A method according to claim 32, wherein the step of storing includes storing encrypted view codes of all views in a drawing.

35. (Original) A method according to claim 34, further including storing at least one of an image file of the drawing, details of a part or component depicted by the drawing, and other information relating to the drawing.

36. (Original) A method according to claim 23 including, prior to extracting the vector properties, a filter process for temporarily removing extraneous material from the drawing.

37. (Original) A method according to claim 36, wherein the filter process includes temporarily removing a frame/border of the drawing.

38. (Original) A method according to claim 37, wherein the frame/border is temporarily removed by identifying line entities which make up the frame/border, identifying an inner boundary of the frame/border line entities, and temporarily deleting all graphic entities outside the inner boundary.

39. (Original) A method according to claim 37, wherein the filter process includes temporarily removing other entities including any one or more of: dimensions, machining marks, lines of prescribed type or name or colour, drawing layers of prescribed name, text with prescribed colour, and blocks.

40. (Original) A method of selecting a CAD drawing for retrieval from a database of drawings, the method comprising: a) producing a CAD source drawing comprising a source view; b) identifying a feature of the source view, wherein the feature comprises a graphic entity or a group of graphic entities; c) extracting properties of the feature from the CAD source drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; d) generating code bits representative of the extracted properties; e) adding the code bits to a source view code for the source view; f) comparing the source view code with each of a plurality of stored view codes and calculating a similarity index for each stored view code of the plurality; and g) selecting the drawing for retrieval from the database on the basis of the similarity index.

41. (Original) A method according to claim 40, wherein the step of selecting comprises identifying a most similar view of the plurality of views, the most similar view having the highest similarity index, and selecting the drawing which contains the most similar view.

42. (Original) A method according to claim 40, wherein the step of selecting includes the step of displaying a list of drawings for user selection of the drawing, the list being ordered

according to the similarity indices of views in the drawings.

43. (Original) A method according to claim 40, wherein the plurality of stored view codes comprises the view codes of views contained in drawings stored in a catalogue, the catalogue being a portion of the database.

44. (Original) A drawing retrieval system for a CAD system comprising means for entering and means for displaying a drawing, and a memory for storing data including a database of drawings, the drawing retrieval system comprising: a) identifying means for identifying a feature of a view in a drawing, wherein the feature comprises a graphic entity or a group of graphic entities; b) means for extracting properties of the feature, wherein the properties include vector properties associated with the entity or group of entities; c) coding means for generating code bits representative of the extracted properties and for adding the code bits to a view code for the view; d) means for storing the view code in the memory; e) comparing means for comparing (i) a first view code of a first view in a first drawing entered in the entering means with (ii) a second view code of a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view; and f) means for presenting, on the basis of the similarity index, a list of drawings from which a user can select for retrieval from the database means for retrieving a selected drawing from the database for display on the display means.

45. (Original) A software carrier comprising computer readable instructions for controlling a computer to code a view in a CAD drawing, including instructions for: a)

identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities; b) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; c) generating code bits representative of the extracted properties; d) adding the code bits to a view code for the view; and e) storing the view code.

46. (Original) A software carrier comprising computer readable instructions for controlling a computer to facilitate selection by a user of a CAD drawing for retrieval from a database of CAD drawings, each CAD drawing in the database comprising at least one view that has been coded by: a) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities; b) extracting properties of the feature from the CAD drawing containing the view, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; c) generating code bits representative of the extracted properties; and d) adding the code bits to a view code for the source view; wherein the computer readable instructions include instructions for: i) producing a CAD source drawing comprising a source view; ii) coding the source view in accordance with steps a) to d) above; iii) comparing the source view code with each of a plurality of stored codes of views in the database of drawings to calculate a similarity index for each stored view code; and iv) on the basis of the similarity index, presenting a list of drawings from which the user can select for retrieval from the database.

47. (Original) A method for determining data ranges of a vector property of a graphic entity in a set of drawings, the method comprising: a) determining a sample of views from said

set of drawings; b) selecting a view from said sample of views; c) identifying said graphic entity in said view; d) extracting said vector property of said graphic entity in said selected view; e) repeating steps b) to d) for the other views in the sample of views; f) determining a minimum and a maximum value of said extracted vector properties; and g) assigning data ranges to said vector properties on the basis of said maximum and minimum values.

48. (Original) A method according to claim 47 wherein the data ranges are assigned to achieve an even distribution of the population of vector property values in each range.

49. (Original) A method of producing a model code directly from a 3-dimensional CAD model, the method comprising: a) identifying a feature in the 3-dimensional CAD model comprising a geometrical entity or a group of geometrical entities; b) extracting properties of the feature from the CAD model, wherein the properties include vector properties associated with the geometrical entity or group of geometrical entities; c) generating code bits representative of the extracted properties; e) adding the code bits to a model code for the model; and f) storing the model code.